

In the Claims:

1. (currently amended) An antisense oligonucleotide, ~~or analog thereof~~, from about 15 to about 100 nucleotides in length comprising at least 15 consecutive nucleotides ~~from~~ with a sequence complementary to a human neuropilin mRNA, wherein said mRNA has a sequence as set forth in SEQ ID NO:33 and wherein said oligonucleotide, ~~or analog thereof~~, specifically binds to a nucleic acid comprising a sequence corresponding to said mRNA and inhibits neuropilin expression in a human.
2. (withdrawn) The antisense oligonucleotide, or analog thereof, of Claim 1 further comprising one or more phosphorothioate internucleotide linkages.
3. (withdrawn) The antisense oligonucleotide, or analog thereof, of Claim 1 further comprising additional nucleotides not complementary to the neuropilin mRNA.
4. (currently amended) A vector comprising an oligonucleotide ~~sequence~~ from about ~~7~~ 15 to about 100 nucleotides in length, said oligonucleotide comprising a sequence complementary to a human neuropilin mRNA, wherein said mRNA has a sequence as set forth in SEQ ID NO:33 and wherein said oligonucleotide, ~~or analog thereof~~, specifically binds to a nucleic acid comprising a sequence corresponding to said mRNA and inhibits neuropilin expression in a human.
5. (currently amended) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and an effective amount of an antisense oligonucleotide, ~~or analog thereof~~, from about 15 to about 100 nucleotides in length comprising at least 15 consecutive nucleotides ~~from~~ with a sequence complementary to a human neuropilin mRNA, wherein said mRNA has a sequence as set forth in SEQ ID NO:33 and wherein said oligonucleotide, ~~or analog thereof~~, specifically binds to a nucleic acid comprising a sequence corresponding to said mRNA and inhibits neuropilin expression in a human.

6. (currently amended) A method for inhibiting the growth of a human tumor comprising, administering to a human ~~suspected of~~ having the tumor an effective amount of an antisense oligonucleotide, ~~or analog thereof~~, from about 20 to about 100 nucleotides in length comprising at least 15 consecutive nucleotides with a sequence complementary to a human neuropilin mRNA under conditions such that the oligonucleotide inhibits the growth of the tumor is inhibited, wherein said mRNA has a sequence as set forth in SEQ ID NO:33, said tumor is derived from a carcinoma, and ~~wherein~~ said oligonucleotide, ~~or analog thereof~~, specifically binds to a nucleic acid comprising a sequence corresponding to said mRNA.
7. (previously amended) The method according to Claim 6 further comprising the step of administering to the human a chemotherapeutic agent.
8. (original) The method according to Claim 6 wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1 – 30.
9. (original) The method according to Claim 6 wherein the oligonucleotide is nuclease resistant.
10. (currently amended) A method for inhibiting the metastasis of a human tumor comprising, administering to a human ~~suspected of~~ having a metastatic tumor an effective amount of an antisense oligonucleotide, ~~or analog thereof~~, from about 20 nucleotides to about 100 nucleotides in length comprising at least 15 consecutive nucleotides with a sequence complementary to a human neuropilin mRNA under conditions such that the oligonucleotide inhibits the metastasis of the tumor is inhibited, wherein said mRNA has a sequence as set forth in SEQ ID NO:33, said tumor is derived from a carcinoma, and

~~wherein~~ said oligonucleotide, ~~or analog thereof~~, specifically binds to a nucleic acid comprising a sequence corresponding to said mRNA.

11. (previously amended) The method according to Claim 10 further comprising the step of administering to the human a chemotherapeutic agent.
12. (original) The method according to Claim 10 wherein the oligonucleotide is nuclease resistant.
13. (original) The method according to Claim 10 wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1 – 30.
14. (withdrawn) A method for inhibiting neovascularization comprising, administering to a human an effective amount of an antisense oligonucleotide, or analog thereof, from about 20 nucleotides to about 100 nucleotides in length comprising a sequence complementary to a human neuropilin mRNA under conditions such that neovascularization is inhibited, wherein said mRNA has a sequence as set forth in SEQ ID NO:33 and wherein said oligonucleotide, or analog thereof, specifically binds to a nucleic acid comprising a sequence corresponding to mRNA.
15. (withdrawn) The method according to Claim 14 wherein the oligonucleotide is nuclease resistant.
16. (withdrawn) The method according to Claim 14 wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID Nos:1 – 30.

17. (currently amended) The antisense oligonucleotide, ~~or analog thereof~~, according to claim 1, wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1 – 30.
18. (original) The vector according to claim 4, wherein the oligonucleotide sequence is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1 – 30.
19. (original) The pharmaceutical composition according to claim 5, wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1 – 30.
20. (withdrawn) The method according to Claim 8, comprising administering said antisense oligonucleotide to a human.
21. (withdrawn) The method according to Claim 13, comprising administering said antisense oligonucleotide to a human.
22. (withdrawn) The method according to Claim 16, comprising administering said antisense oligonucleotide to a human.
23. (currently amended) A method of inhibiting the growth of human cancer cells comprising, contacting said cancer cells *in vitro* with an effective amount of an antisense oligonucleotide, ~~or analog thereof~~, from about ~~7~~ 20 to about 100 nucleotides in length comprising at least 15 consecutive nucleotides with a sequence complementary to a human neuropilin mRNA, wherein said mRNA has a sequence as set forth in SEQ ID NO:33, under conditions such that the oligonucleotide inhibits the growth of the cancer cells ~~is inhibited, wherein said mRNA has a sequence as set forth in SEQ ID NO:33.~~

24. (previously added) The method according to claim 23, wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1 – 30.
25. (previously added) The method according to Claim 23 wherein the oligonucleotide is nuclease resistant.
26. (withdrawn) An antisense oligonucleotide, or analog thereof, from about 7 to about 100 nucleotides in length comprising a sequence complementary to a transcribed region of a neuropilin gene, wherein said transcribed region has a sequence as set forth in any one of SEQ ID NOs:33 - 35 and wherein said oligonucleotide, or analog thereof, specifically binds to a nucleic acid comprising a sequence corresponding to said transcribed region and inhibits neuropilin expression.
27. (withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable excipient and an effective amount of the antisense oligonucleotide, or analog thereof, according to Claim 26.
28. (withdrawn) A method for inhibiting the growth of a human or rodent tumor comprising administering to a human or rodent suspected of having the tumor an effective amount of the antisense oligonucleotide, or analog thereof, according to Claim 26.
29. (withdrawn) A method for inhibiting the metastasis of a human or rodent tumor comprising administering to a human or rodent suspected of having a metastatic tumor an effective amount of the antisense oligonucleotide, or analog thereof, according to Claim 26.

30. (currently amended) The method according to Claim 6 or 10, comprising administering said antisense oligonucleotide, ~~or analog thereof~~, by infusion.
31. (new) The oligonucleotide according to Claim 1, wherein said oligonucleotide is from about 20 to about 100 nucleotides in length.
32. (new) The oligonucleotide according to Claim 1, wherein said oligonucleotide consists of a sequence selected from the group of SEQ ID NOs: 1-30.
33. (new) The oligonucleotide according to Claim 1, wherein said oligonucleotide is a peptide nucleic acid.
34. (new) The oligonucleotide according to Claim 1, wherein said oligonucleotide comprises a morpholino backbone structure.
35. (new) The oligonucleotide according to Claim 1, wherein said oligonucleotide comprises at least one modified base selected from the group consisting of xanthine, hypoxanthine, 2-aminoadenine, 6-methyl, 2-propyl and other alkyl adenines, 5-halo uracil, 5-halo cytosine, 6-aza uracil, 6-aza cytosine and 6-aza thymine, pseudo uracil, 4-thiouracil, 8-halo adenine, 8-aminoadenine, 8-thiol adenine, 8-thiolalkyl adenines, 8-hydroxyl adenine, 8-halo guanines, 8-amino guanine, 8-thiol guanine, 8-thioalkyl guanines, 8-hydroxyl guanine, 5-trifluoromethyl uracil and 5-trifluoro cytosine.
36. (new) The oligonucleotide according to Claim 1, wherein said oligonucleotide comprises one or more modified internucleotide linkages in the phosphate backbone selected from the group consisting of methyl phosphonate, phosphorothioate, phosphorodithioate and phosphotriester internucleotide linkages.

37. (new) The oligonucleotide according to Claim 1, wherein the oligonucleotide comprises one or more phosphorothioate internucleotide linkages.
38. (new) The oligonucleotide according to Claim 1, wherein the oligonucleotide comprises one or more alkyl, cycloalkyl or heterocyclic intersugar linkages.
39. (new) The oligonucleotide according to Claim 1, wherein the oligonucleotide comprises at least one nucleotide that is a 2'-O-substituted ribonucleotide.
40. (new) The oligonucleotide according to Claim 1, wherein said oligonucleotide is nuclease resistant.
41. (new) The vector according to Claim 4, wherein said oligonucleotide is from about 20 to about 100 nucleotides in length.
42. (new) The vector according to Claim 4, wherein said oligonucleotide consists of a sequence selected from the group of SEQ ID NOs: 1-30.
43. (new) The pharmaceutical composition according to Claim 5, wherein said oligonucleotide is from about 20 to about 100 nucleotides in length.
44. (new) The pharmaceutical composition according to Claim 5 wherein said oligonucleotide oligonucleotide consists of a sequence selected from the group of SEQ ID NOs: 1-30.
45. (new) The method according to Claim 6, wherein said tumor is a cancer selected from the group consisting of melanoma, colon cancer, lung cancer, prostate cancer, pancreatic cancer and breast cancer.

46. (new) The method according to Claim 10, wherein said tumor is a cancer selected from the group consisting of melanoma, colon cancer, lung cancer, prostate cancer, pancreatic cancer and breast cancer.
47. (new) A method of inhibiting colon cancer growth comprising, administering to a human having a colon cancer an effective amount of an antisense oligonucleotide from about 20 to about 100 nucleotides in length comprising at least 15 consecutive nucleotides with a sequence complementary to a human neuropilin mRNA, wherein said mRNA has a sequence as set forth in SEQ ID NO:33, and wherein said oligonucleotide inhibits the growth of the colon cancer in the human.
48. (new) The method according to Claim 47 further comprising the step of administering to the human a chemotherapeutic agent.
49. (new) The method according to Claim 47, wherein the oligonucleotide is nuclease resistant.
50. (new) The method according to Claim 47, wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1-30.
51. (new) The method according to Claim 47, wherein the oligonucleotide consists of a sequence selected from the group of SEQ ID NOs:1-30.
52. (new) A method of inhibiting metastasis of a melanoma comprising, administering to a human having a melanoma an effective amount of an antisense oligonucleotide from about 20 nucleotides to about 100 nucleotides in length comprising at least 15

consecutive nucleotides with a sequence complementary to a human neuropilin mRNA, wherein said mRNA has a sequence as set forth in SEQ ID NO:33, and wherein said oligonucleotide inhibits the metastasis of the melanoma in the human.

53. (new) The method according to Claim 52, further comprising the step of administering to the human a chemotherapeutic agent.
54. (new) The method according to Claim 52, wherein the oligonucleotide is nuclease resistant.
55. (new) The method according to Claim 52, wherein the oligonucleotide is from 20 to about 100 nucleotides in length and comprises a sequence selected from the group consisting of SEQ ID NOs:1-30.
56. (new) The method according to Claim 52, wherein the oligonucleotide consists of a sequence selected from the group of SEQ ID NOs:1-30.
57. (new) The method according to Claim 47, comprising administering said antisense oligonucleotide by infusion.
58. (new) The method according to Claim 52, comprising administering said antisense oligonucleotide by infusion.
59. (new) The method according to Claim 6, wherein the wherein the oligonucleotide consists of a sequence selected from the group of SEQ ID NOs:1-30.
60. (new) The method according to Claim 10, wherein the oligonucleotide consists of a sequence selected from the group of SEQ ID NOs:1-30.

In re Application of:

· Wright et al.

Application No.: 09/296,264

Filed: April 22, 1999

Page 11

PATENT

Attorney Docket No.: MBM1250-2

61. (new) The method according to Claim 23, wherein the oligonucleotide consists of a sequence selected from the group of SEQ ID NOs:1-30.